Notice of Allowability	Application No.	Applicant(s)	
	10/758,546	ZHOU ET AL.	
	Examiner	Art Unit	
	Baoquoc N. To	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *02/26/2007*.

2. ☒ The allowed claim(s) is/are *1-3,5,6,8,10-21,23,24,26 and 28-37*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

 * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

 Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *03/03/2007* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. Claims 1-3, 5-6, 8, 12-16, 19-21, 23-24, 26, 30-34 and 36-37 are amended, claims 4, 7, 9, 22, 25 and 27 are canceled in the amendment filed on 01/16/2007. Claims 1-3, 5-6, 8, 10-21, 23-24, 26 and 28-37 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Griffith, Reg. No. 48,956 on 02/23/2007.

Please amend the application as follow:

1. (Currently amended) A method of automated graphics generation in response to a user request comprising:

determining a measure of similarity between the user request and one or more stored graphical examples to measure whether the one or more stored graphical examples are adequate for creating one or more new graphical illustrations in accordance with the user request;

if the user request and the one or more stored graphical examples are similar, searching for at least one matching graphical example among the one or more graphical examples for the user request;

if the user request and the one or more stored graphical examples are not similar, systematically decomposing the user request into sub-requests and the one or more stored graphical examples into graphical fragments in accordance with at least

one of syntactic, semantic and pragmatic characteristics of the one or more graphical examples, and searching for at least one matching graphical fragment among the one or more graphical examples for the user request ~~if the user request and the one or more stored graphical examples are inadequately similar~~;

~~searching for at least one of at least one matching graphical example and at least one graphical fragment among the one or more graphical examples for the user request; and~~

composing the one or more new graphical illustrations from at least one of the at least one matching graphical example and the at least one matching graphical fragment, using a pattern-based composition; and

storing the one or more composed graphical illustrations in a database for use by the user;

wherein the determining, decomposing, searching and composing steps utilize a cooperative critiquing technique between a user and a system for automated graphics generation.

12. (Currently amended) The method of claim 1, wherein ~~obtaining~~ searching for at least one stored graphical example comprises:

arranging stored graphical examples into hierarchical clusters according to each computed similarity measurement;

searching a cluster at a highest hierarchical level most likely to contain a top-matched graphical example having the greatest similarity measurement to the user request;

determining a measure of similarity between the user request and each graphical example within the searched cluster; and

outputting at least one graphical example of the searched cluster having the greatest similarity measurement.

16. (Currently amended) The method of claim 1, wherein creating graphics ~~from at least one obtained graphical example~~ comprises:

extracting at least one composition pattern from the database;

generalizing the at least one composition pattern;

determining whether at least one new composition is valid using at least one generalized composition pattern; and

selecting the most probable valid composition.

19. (Currently amended) Apparatus for automatically generating graphics from a user request, the apparatus comprising:

a memory; and

at least one processor coupled to the memory and operative to: (i) determine a measure of similarity between the user request and one or more stored graphical examples to measure whether the one or more stored graphical examples are adequate for creating one or more new graphical illustrations in accordance with the user request; (ii) if the user request and the one or more stored graphical examples are adequately similar, search for at least one matching graphical example among the one or more graphical examples for the user request; (iii) if the user request and the one or more stored graphical examples are not adequately similar, systematically decompose the user request into sub-requests and the one or more stored graphical examples into graphical fragments in accordance with at least one of syntactic, semantic and pragmatic characteristics of the one or more graphical examples, and searching for at least one matching graphical fragment among the one or more graphical examples for the user request ~~if the user request and the one or more stored graphical examples are inadequately similar~~; ~~(iii) search for at least one of at least one matching graphical example and at least one graphical fragment among the one or more graphical examples for the user request;~~ ~~and~~ (iv) compose the one or more new graphical illustrations from at least one of the at least one matching graphical example and the at least one matching graphical fragment, using a pattern-based composition; and (v) store the one or more composed graphical illustrations in a database for use by the user;

wherein the determining, decomposing, searching and composing steps utilize a cooperative critiquing technique between a user and a system for automated graphics generation.

34. (Currently amended) The apparatus of claim 19, wherein the creating graphics ~~from at least one obtained graphical example~~ comprises the operations of:

extracting at least one composition pattern from the database;

generalizing the at least one composition pattern;

determining whether at least one new composition is valid using at least one generalized composition pattern; and

selecting the most probable valid composition.

37. (Currently amended) An article of manufacture for automatically generating graphics from a user request, comprising a machine readable medium containing one or more programs which when executed implements:

determining a measure of similarity between the user request and one or more stored graphical examples to measure whether the one or more stored graphical examples are adequate for creating one or more new graphical illustrations in accordance with the user request;

if the user request and the one or more stored graphical examples are similar, searching for at least one matching graphical example among the one or more graphical examples for the user request;

if the user request and the one or more stored graphical examples are not similar, systematically decomposing the user request into sub-requests and the one or more stored graphical examples into graphical fragments in accordance with at least one of syntactic, semantic and pragmatic characteristics of the one or more graphical examples, and searching for at least one matching graphical fragment among the one or more graphical examples for the user request ~~if the user request and the one or more stored graphical examples are inadequately similar~~;

~~searching for at least one of at least one matching graphical example and at least one graphical fragment among the one or more graphical examples for the user request; and~~

composing the one or more new graphical illustrations from at least one of the at least one matching graphical example and the at least one matching graphical fragment, using a pattern-based composition; and

storing the one or more composed graphical illustrations in a database for use by the user;

wherein the determining, decomposing, searching and composing steps utilize a cooperative critiquing technique between a user and a system for automated graphics generation.

Allowable Subject Matter

3. Claims 1-3, 5-6, 8, 10-21, 23-24, 26 and 28-37 are allowed over prior art made of record.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the examiner agrees with the applicant argument that Zhou fails to discloses "determining a measure of similarity between the user request and one or more stored graphical examples to measure whether the one or more stored graphical examples are adequate for creating one or more new graphical illustrations in accordance with the user request; if the user request and the one or more stored graphical examples are similar, searching for at least one matching graphical example among the one or more graphical examples for the user request; if the user request and the one or more stored graphical examples are not similar, systematically decomposing the user request into sub-requests and the one or more stored graphical examples into graphical fragments in accordance with at least one of syntactic, semantic and pragmatic characteristics of the one or more graphical examples, and searching for at least one matching graphical fragment among the one or more graphical examples for the user request" in conjunction with "composing the one or more new graphical

illustrations from at least one of the at least one matching graphical example and the at least one matching graphical fragment, using a pattern-based composition; and storing the one or more composed graphical illustrations in a database for use by the user; wherein the determining, decomposing, searching and composing steps utilize a cooperative critiquing technique between a user and a system for automated graphics generation."

Claims 2-3, 5, 8, 10-18 are depended on claim 1; therefore, claims 2-3, 5, 8, 10-18 are allowed under the same reason as to claim 1.

Claim 19 is an apparatus for automatically generation graphics which carry out the steps as to claim 1; therefore, claim 19 is allowed under the same reason.

Claims 20-21, 23-24, 26, 28-36 are depended on claim 19; therefore, claims 20-21, 23-24, 26, 28-36 are allowed under the same reason as to claim 19.

Claim 37 is an article of manufacture for automatically generating graphics from a user request, comprising a machine readable medium containing one or more programs which when executed to implement the steps as to claim 1; therefore, claim 37 is allowed under the same reason as to claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent:

Matsugu et al. (US. Patent No. 6,766,055 B2) Patent date: 07/20/2004.

Collins (US. Patent No. 5,764,518) Patent date: 06/07/1998.

NPL:

Singh et al. Automating the lexical and syntactic design of graphical user interfaces: the UofA*UIMS, ACM transaction, Vol. 10, Issue. 3, July 1991, pages 213-254.

Fisher et al. Integrating automated test generation into the WYSIWYT spreadsheet testing methodology, ACM Transaction of Software engineering and Methodology, Vol. 5, Issue 2, April 2006, pages 150-194.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041, or unofficial fax number for the purpose of discussion (571) 273-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) 273-8300 [Official Communication]

BQ To

March 3rd, 2007

JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100